

WHAT IS CLAIMED IS:

1. A non-shrink high viscosity chemical grout comprising:
on the basis of solid content,
 - a) 100 parts by weight of a room temperature curable organic liquid
 - 5 phase resin;
 - b) 10 to 200 parts by weight of glass beads; and
 - c) 10 to 500 parts by weight of glass powder.
2. The non-shrink high viscosity chemical grout according to claim 1, wherein the a) room temperature curable organic liquid phase resin is selected from
10 the group consisting of an epoxy based resin and a polyurethane based resin.
3. The non-shrink high viscosity chemical grout according to claim 2, wherein the epoxy based resin is a non-solvent or solvent diluting epoxy resin having molecular weight of 350 to 3000 MW of diglycidyl type or triglycidyl type.
4. The non-shrink high viscosity chemical grout according to claim 1, wherein
15 the b) glass beads have particle diameter of 200 mesh to 3 mm.
5. The non-shrink high viscosity chemical grout according to claim 1, wherein the c) glass powder has particle diameter of 10 μm to 1 mm.
6. The non-shrink high viscosity chemical grout according to claim 1, wherein the grout has viscosity of 1000 to 20000 cps.
- 20 7. A non-shrink high viscosity chemical grout comprising the components of the non-shrink high viscosity chemical grout according to anyone of claims 1 to 6, and, on the basis of 100 parts by weight of the a) room temperature curable organic liquid phase resin, d) 1 to 50 parts by weight of glass fiber.
8. The non-shrink high viscosity chemical grout according to claim 7, wherein
25 the d) glass fiber is a chopper fiber prepared by cutting a long glass fiber of E-glass composition to a length of 2 to 12 mm, or a milled fiber prepared by

milling the same to a length of 100 to 300 μm .

9. The non-shrink high viscosity chemical grout according to claim 7, wherein the chemical grout has viscosity of 15000 to 20000 cps.

10. A method for repairing and reinforcing a construction, which uses the
5 non-shrink high viscosity chemical grout of claim 1 or claim 9.

11. The method for repairing and reinforcing a construction according to claim 10, which comprises the steps of cleaning the surface of a part to be reinforced or around cracks of a construction, coating the surface with the non-shrink high viscosity chemical grout, and curing the coated surface to
10 form a coating film.

12. The method for repairing and reinforcing a construction according to claim 10, which comprises the steps of installing an injection pack on the upper part of cracks of a construction to inject the non-shrink high viscosity chemical grout on the upper part of cracks by free fall caused by gravity or by
15 applying pressure, removing the injection pack, and finish-treating the cracked surface.

13. The method for repairing and reinforcing a construction according to claim 10, wherein a part of a construction to be filled is cleaned and then filled with the non-shrink high viscosity chemical grout.

20 14. The method for repairing and reinforcing a construction according to claim 13, wherein the construction has cracks having width of 0.5 mm or more, or corroded inner steel reinforcing, and a part to be filled is filled with the non-shrink high viscosity chemical grout without conducting a separate U or V type cutting.

25 15. The method for repairing and reinforcing a construction according to claim 10, wherein reinforcement is integrated into the construction, and the

non-shrink high viscosity chemical grout is used as an adhesive.

16. The method for repairing and reinforcing a construction according to claim 10, wherein a carbon fiber is impregnated into the non-shrink high viscosity chemical grout and then pulled up, and adhered and cured to a
5 direction of main reinforcement of a concrete.

17. The method for repairing and reinforcing a construction according to claim 10, wherein a carbon fiber is impregnated into the non-shrink high viscosity chemical grout and cured to prepare a panel, and the panel is adhered to a construction.

10 18. The method for repairing and reinforcing a construction according to claim 10, wherein a damaged part of an underwater or submerged construction is restored with the non-shrink high viscosity chemical grout.

19. A method for repairing and reinforcing a bottom of a ship, which uses the non-shrink high viscosity chemical grout according to claim 1 or claim 9.

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